

9th Edition of International Conference on

## Dentistry and Oral Health

September 02-04, 2024 Madrid, Spain | Hybrid Event



Venue: Rafaelhoteles Atocha C. de Méndez Álvaro, 30, 28045 Madrid, Spain

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# BOOK OF ABSTRACTS



## 02-04

9th Edition of International Conference on

### Dentistry and Oral Health



### **Keynote Speakers**



**David Gillam** Queen Mary University of London, United Kingdom



Jaap Boehmer Rijnstate Hospital, Netherlands



Steven J Traub American Institute of Oral Biology, United States



Zvi G Loewy New York Medical College, United States



Yasser Khaled Marquette University, United States



Preetinder Singh Academy of Oral Surgery, United States



Rolf Ewers University of Vienna, Austria



Fay Goldstep International Speaker, Canada



Hariharan Ramakrishnan Thai Moogambigai Dental College and Hospital, Dr MGR Educational and Research Institute, India



Laurindo Moacir Sassi Erasto Gaertner Hospital and Mackenzie Evangelical University Hospital, Brazil



Maggie Augustyn Untangle Me, LLC, United States



Andrea Scribante University of Pavia, Italy



Maurizio Pascadopoli University of Pavia, Italy



Lacy Walker Shared Hygiene, LLC, Germany

Thank You  $\mathcal{All}...$ 

### **Speakers**



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Abdulrahman Almalki Prince Sattam Bin Abdulaziz University, Saudi Arabia



Aditya Singh Patel Sharad Pawar Dental College & Hospital, India



Ahmad Hashridz Bin Ruslan Universiti Sains Malaysia, Malaysia



Ahmed Mohamed Hebeshi Prosthodontist at Egyptian Ministry of Health, Egypt



Amitha H. A, VS Dental College and Hospital, India



Anurag Tripathi George Medical University, India



Arshia Rashid Baig Sharad Pawar Dental College and Hospital, India



Ashley Bond Chief Dental Billing Officer at Wisdom, United States



David Williams OMFS Musgrove Park Hospital, United Kingdom



Debora do Canto Assaf Universidade Franciscana, Brazil



Deep Shah Molar Bear Dental Studio, India



Duc-Minh Lam-Do Montreal Tongue-Tie Institute, Canada



Eduardo Rubio
Argentinian Catholic University,
Argentina



Elishan Aruliah Prince of Wales Hospital, Australia



Emmanuel Samson Government Medical college Miraj, India



Gaurav Mishra King George's Medical University, India



Gaurav Vishal Prathima Cancer Institute, India



Jackson Martins Kalinoski Implants Clinica Odontologica, Brazil



Jamal Hassan Assaf Federal University of Santa Maria and Private Clinic, Brazil



Jessica de Oliveira Rossi University of São Paulo, Brazil



Jonathan Bonanno Chief Psycho & CE Computech, United States



Kanika Gupta Verma Teerthankar Mahaveer University, India

### **Speakers**



Khoa Le, Eyes of Al Chief Executive Officer, Australia



Lujain AlSahman King Khalid University, Saudi Arabia



Luke Chung Royal Darwin Hospital, Australia



Madhulika Banerjee Vishnu Dental College, India



Maedeh Ghorbanpour Islamic Azad University, Iran (Islamic Republic of)



Mark Rozenbilds Royal Darwin Hospital, Australia



Mihajlo Petrovski Goce Delcev University, North Macedonia



Mohamed Azhari International University of Rabat, Morocco



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Pantelejmon Trpchevski Medical University – Varna, Bulgaria



Pradnya S Jadhav Government Dental College & Hospital, India



Ramesh Nagarajappa The Oxford Dental College, India



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Salah Mohammed Hafedh CEO of Genesis Medical & Cosmetics, Yemen



Shveta Setia Thareja SGT University, India



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Vijay Kumar S Amrita Vishwa Vidyapeetham, India



Yeganeh Arian Kerman Medical University, Iran (Islamic Republic of)



YuYeon Jung Catholic Kwandong University, South Korea

Thank You
All...

### Welcome Message



Queen Mary University of London, United Kingdom

Dear Attendees, Presenters, Organizing Committee and Distinguished Guests

The invitation to write this welcome message is both an honour and a privilege and as such I am very grateful to be the Organizing Committee of ICDO 2024. I would like to warmly welcome you to the 9th Edition of International Conference on Dentistry and Oral Health which will be held in the historical city of Madrid or alternatively on-line (if you are unable to present in-person). With the theme of this year's conference Observing Recent Advances and Leveraging Innovation in Dentistry, you will have the opportunity to listen to well-known speakers on a wide range of topics over the course of the conference. There will also be an opportunity for colleagues to present their area of expertise to their colleagues, which in turn will help foster cooperation between colleagues across the research world. I hope that you will not only enjoy the conference but also establish links for future research as well as foster friendships that will endure for years to come.

### Welcome Message



Yasser Khaled

Marquette University, United States

### Dear Conference Attendees,

It is an honor and great pleasure to write a few welcome notes towards International Conference on Dentistry and Oral Health. We are living in the era of ever-escalating national crisis of oral health problems and its related comorbidities in both adults and youth. A multi-disciplinary approach linking basic, clinical and public health research is desperately necessitated to advance our understanding of the growing pandemic of oral health issues. It will be a great opportunity for the participants from all around the world including young and senior researchers, scientists, clinicians and academicians to gain knowledge with the up-to-date research in oral and dental care.



Magnus Group, a distinguished scientific event organizer, has been at the forefront of fostering knowledge exchange and collaboration since its inception in 2015. With a steadfast commitment to the ethos of Share, receive, grow, Magnus Group has successfully organized over 200 conferences spanning diverse fields, including Healthcare, Medical, Pharmaceutics, Chemistry, Nursing, Agriculture, and Plant Sciences.

The core philosophy of Magnus Group revolves around creating dynamic platforms that facilitate the exchange of cutting-edge research, insights, and innovations within the global scientific community. By bringing together experts, scholars, and professionals from various disciplines, Magnus Group cultivates an environment conducive to intellectual discourse, networking, and interdisciplinary collaboration.

Magnus Group's unwavering dedication to organizing impactful scientific events has positioned it as a key player in the global scientific community. By adhering to the motto of Share, receive, grow, Magnus Group continues to contribute significantly to the advancement of knowledge and the development of innovative solutions in various scientific domains.



Magnus Group invites you to the 9th Edition of the International Conference on Dentistry and Oral Health (ICDO 2024), happening from September 02-04, 2024. This hybrid event, held both in the vibrant city of Madrid, Spain and virtually, centers on the theme ORAL: Observing Recent Advances and Leveraging Innovation in Dentistry. The conference will focus on modern dental practices and oral healthcare, aligning with global health goals.

ICDO 2024 will be a key platform for collaboration, bringing together researchers, scientists, dentists, and industry experts. The event will foster the exchange of innovative ideas, expertise, and the building of professional networks, encouraging co-development of policies and partnerships among dental professionals and stakeholders.

With an agenda packed with keynote addresses, oral presentations, poster sessions, and panel discussions, attendees can look forward to an inspiring experience that drives the future of dentistry and oral health, contributing to global health initiatives.



The Continuing Education (CE) credits available at ICDO 2024 hold significant value for participants, recognizing and affirming their dedication to continuous learning and professional growth. Earning CE credits brings numerous advantages, such as advancing one's career, upholding professional credentials, expanding knowledge base, and fostering networking opportunities. By attending ICDO 2024 and acquiring CE credits, individuals showcase their commitment to ongoing education, elevate their professional standing, and open doors to career progression. Moreover, meeting a minimum CE credit requirement is often obligatory for maintaining certifications or licenses in various fields. The ICDO 2024 Conference not only offers ample networking chances with peers and experts but also facilitates the expansion of professional connections and the cultivation of potential collaborations. Notably, each attendee will receive a total of 28 CE credits at the conference.

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## 02-04

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Dentistry and Oral Health



KEYNOTE PRESENTATIONS

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### Petrovski Mihajlo<sup>1\*</sup>, Minovska Ana<sup>2</sup>

<sup>1</sup>Faculty of medical sciences, Goce Delcev University, Stip, Republic of North Macedonia

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### Influence of periodontal therapy on chemical and mineralogical characteristics of root surface

**Introduction**: Dental cementum is an avascular and non-innervated mineralized tissue covering the root surface that is continuously and slowly created throughout life. The distribution of minerals and different chemical elements in mature dental cementum shows great variability, and changes in chemical and mineralogical characteristics also occur during the implementation of different therapeutic procedures in periodontology.

**Aim**: This research was to compare the chemical and mineralogical characteristics after performing three different therapeutic procedures.

Material and Method: The examined sample included a total number of 60 teeth in which there was an indication for extraction. All extracted teeth that were part of the sample had stage III and IV of periodontal disease. The total number of teeth that met the criteria for participation in this research were divided into three groups of 20 teeth, according to which of the performed therapeutic procedures was applied: (1) Group I: Teeth that have undergone a therapeutic procedure including usage of ultrasonic instruments and manual instruments. All of them were chemically analysed using ICP with mass spectrophotometry and X-ray diffractometry; (2) Group II: Consisted of teeth in which, after ultrasonic instrumentation, laser-assisted treatment with Er: YAG laser were used that were chemically analysed using ICP with mass spectrophotometry and X-ray diffractometry and (3) Control group: Impacted teeth with an indication for extraction or teeth that are for extraction for a non-periodontal reason. These teeth were chemically analysed using ICP with mass spectrophotometry and X-ray diffractometry.

Results: There was a reduction in the calcium present in the treated root surfaces, and the calcium loss was greater in the laser treated root surfaces. There were changes in the ratio of organic and inorganic constituents of cementum observed in root surfaces of treated teeth compared to root surfaces obtained from healthy teeth. The greatest loss of inorganic components in the cement structure was observed in surfaces treated with conventional periodontal therapy. There was a significantly closer ratio of the organic and inorganic part of cementum on root surfaces obtained from laser-treated teeth and healthy teeth. There were insignificant changes in the mineralogical composition of the cementum observed in treated teeth compared to root surfaces obtained from healthy teeth. Root surfaces originating from healthy teeth were dominated by hydroxyl-apatite and carbonate apatite, root surfaces treated with conventional periodontal therapy are dominated by amorphous apatite (indicating loss of the proper crystal structure of apatite), while root surfaces from teeth treated with laser-assisted therapy, apart from hydroxyl apatite, portlandite (calcium hydroxide with a grid similar to brushite) also occurs.

**Conclusion**: Changes in the chemical characteristics of the root surfaces occur during the application of any therapeutic procedure in relation to the surfaces of healthy teeth. There are numerous chemical changes observed in untreated periodontal affected root surfaces compared to root surfaces obtained from healthy teeth.

### **Audience Take Away Notes**

- Authors want to present the effects of conventional and laser-assisted periodontal therapy on the
  chemical and mineralogical characteristics of the dental cementum covering the root surfaces of teeth
  affected by chronic periodontitis. All these data are compared with those of untreated healthy root
  surfaces which are assumed which are considered the most adequate, because they originate from
  unaffected teeth.
- All findings that will be presented indicate that there is essential importance of the chemical and
  mineralogical characteristics of the root surface and it can be noted that the application of laserassisted periodontal treatment can contribute to the design of an appropriate biomimetic root surface
  that is most important for adequate process of healing.
- Based on this, the obtained results will make a scientific contribution in the field of modern therapy of periodontal disease and will confirm the scientific findings, which indicate that the use of laser light gives greater benefit on the healing process of the periodontium after the therapy.
- Presented results and the consequential conclusions of this presentation are important both for the clinical dentists and for the scientific knowledge for the effect of different therapeutic modalities in the periodontology.
- At the end, it is can be noted that laser-assisted periodontal treatment has numerous advantages
  over conventional therapy. This gives a significant scientific contribution that will have significance in
  everyday dental practice.
- This presentation is also aimed for avoiding all dilemmas that dental clinicians have about the dental lasers, their superiority and opportunities.
- Nowadays, all technological advances and enhancements have increased the possibilities of available
  laser systems in everyday dental practice. Among them, the laser devices that produce Er: YAG laser
  beams seem to have most promising use and are considered to become an indispensable tool in modern
  dentistry.

### **Biography**

Ass. Prof. Mihajlo Petrovski, DDM, PhD, in December 2013, Dr. Mihajlo Petrovski become Master of Dental Sciences (Oral health in institutionalized elderly). In November 2021, become specialist in periodontology. He enrolls PhD studies in the academic year 2017/2018 in the field of Basic and Clinical Research in Dental Medicine (PhD thesis Analysis of micro-tographic and chemical characteristics of the root surface of the tooth after conventional and laser assisted periodontal therapy) and in 2021he becomes PhD in Dental Sciences. In May 2017, Dr. Mihajlo Petrovski becomes teaching assistant at the Faculty of Medical Sciences at University Goce Delchev in Stip.